Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Please amend the claims as follows:

1-20 (Cancelled)

21. (New) Diene-bis-aquo-rhodium(I) complex of the formula:

$$[Rh(diene)(H2O)2]X (1)$$

where diene is a cyclic diene and X is a noncoordinating anion.

- 22. (New) The diene-bis-aquo-rhodium(I) complex according to Claim 21, wherein diene is 1,5-cyclooctadiene (COD) or norbornadiene (NBD).
- 23. (New) The diene-bis-aquo-rhodium(I) complex according to Claim 21, wherein X is a noncoordinating anion selected from the group consisting of BF₄ and CF₃SO₃.
- 24. (New) The diene-bis-aquo-rhodium(I) complex according to Claim 22, wherein X is a noncoordinating anion selected from the group consisting of BF₄ and CF₃SO₃.
- 25. (New) The diene-bis-aquo-rhodium(I) complex according to Claim 21 having the name 1,5-cyclooctadienebisaquorhodium(I) tetrafluoroborate.
- 26. (New) The diene-bis-aquo-rhodium(I) complex according to Claim 22 having the name 1,5-cyclooctadienebisaquorhodium(I) tetrafluoroborate.

- 27. (New) Diene-bis-aquo-rhodium(I) complex according to Claim 21 having the name 1,5-cyclooctadienebisaquorhodium(I) trifluoromethylsulphonate.
- 28. (New) Diene-bis-aquo-rhodium(I) complex according to Claim 22 having the name 1,5-cyclooctadienebisaquorhodium(I) trifluoromethylsulphonate.
- 29. (New) The diene-bis-aquo-rhodium(I) complex according to Claim 21, wherein the complex is in the form of a solid.
- 30. (New) Process for preparing a diene-bis-aquo-rhodium(I) complex according to Claim 21, which comprises reacting a rhodium(I)-olefin compound with a silver salt in an aqueous solvent mixture as a reaction mixture, wherein the silver salt is prepared in solution and is added to the reaction mixture.
- 31. (New) The process for preparing a diene-bis-aquo-rhodium(I) complex according to Claim 30, wherein the silver salt is prepared in solution by reacting silver oxide (Ag₂O) with the acid corresponding to the noncoordinating anion of the diene-bis-aquo-rhodium(I) complex.
- 32. (New) The process for preparing a diene-bis-aquo-rhodium(I) complex according to Claim 30, wherein the acid is used in an excess of up to 0.5 molar equivalents over the silver oxide.
- 33. (New) The process for preparing a diene-bis-aquo-rhodium(I) complex according to Claim 30, wherein the preparation of the silver salt is carried out in an aqueous medium.
- 34. (New) The process for preparing a diene-bis-aquo-rhodium(I) complex according to Claim 31, wherein the preparation of the silver salt is carried out in an aqueous medium.

- 35. (New) The process for preparing a diene-bis-aquo-rhodium(I) complex according to Claim 30, wherein the rhodium(I)-olefin compound is [Rh(COD)C1]₂.
- 36. (New) The process for preparing a diene-bis-aquo-rhodium(I) complex according to Claim 30, wherein the aqueous solvent mixture comprises water together with up to 10% by volume of at least one alcoholic solvent.
- 37. (New) The process for preparing a diene-bis-aquo-rhodium(I) complex according to Claim 31, wherein the aqueous solvent mixture comprises water together with up to 10% by volume of at least one alcoholic solvent.
- 38. (New) The process for preparing a diene-bis-aquo-rhodium(I) complex according to Claim 36, wherein the alcoholic solvent is selected from methanol, ethanol, n-propanol, isopropanol, n-butanol and tert-butanol.
- 39. (New) In a catalytic reaction, the improvement comprising carrying out said reaction in the presence of diene-bis-aquo-rhodium(I) complex according to Claim 21.
- 40. (New) In a method for preparing a heterogeneous catalyst, the improvement comprising carrying out said method with presence of a diene-bis-aquo-rhodium(I) complex according to Claim 21.
- 41. (New) In a method for preparing a chirally nonselective, diastereoselective or enantioselective catalytically active species comprising carrying out said method in the presence of a diene-bis-aquo-rhodium(I) complex according to Claim 21.

- 42. (New) The method according to Claim 41, wherein the diene-bis-aquo-rhodium(I) complex is reacted with achiral and/or chiral ligands with ligand exchange.
- 43. (New) The method according to Claim 42, wherein the achiral and/or chiral ligands are selected from the group consisting of triphenylphosphine, ferrocenylphosphine, alkylphosphine and chiral phosphine.
- 44. (New) A chirally nonselective, diastereoselective or enantioselective catalytically active species, obtainable by reacting a diene-bis-aquo-rhodium(I) complex according to Claim 21 with achiral and/or chiral ligands with ligand exchange.
- 45. (New) The chirally nonselective, diastereoselective or enantioselective catalytically active species according to Claim 44, wherein the achiral and/or chiral ligands are selected from the group consisting of triphenylphosphine, ferrocenylphosphine, alkylphosphine and chiral phosphine.